

considerations rather than the proposed one percent common ownership benchmark.

The Notice's proposed in-service-area ban on cellular participation in new PCS spectrum allocations is based on a tentative assumption that leads to demonstrably wrong results. As shown above, cellular participation in PCS would be positively beneficial and there is a wide range of cases where there is no reason to assume that cellular carriers would be any less aggressive than other potential entrants in deploying PCS systems. Because the Notice's rationale does not accurately reflect the competitive realities of the wireless marketplace, any in-service-area ban is wholly unjustified.

B. Telephone Company Participation In PCS Should Be Encouraged And Access To New Wireless Technologies For Telephone Company Services Should Be Ensured.

Just as there is no basis for barring cellular carriers from having access to unlicensed PCS spectrum and for applying for the 900 MHz narrowband PCS spectrum or the 2 GHz PCS spectrum, there is no basis to bar telephone companies from participating in any unlicensed PCS spectrum and applying for the 900 MHz narrowband PCS spectrum or the 2 GHz PCS spectrum. Telephone companies have a long history of involvement in providing mobile services such as Mobile Telephone Service, Improved Mobile Telephone Service, General Aviation Air-to-Ground Telephone Service, Public Coast Telephone Service, Telephone Maintenance Radio

Service, and Paging. This is in addition to the LEC's participation in cellular. Thus, LECs have the technical expertise and the ability to participate in this latest wireless service.

As the Commission stated in the NPRM, ¶71: "PCS is likely to be both a complement and potentially a competitor to local wireline exchange service. Initially, we expect that PCS primarily will complement LEC-provided wire loops, while over time PCS may become a full fledged competitor to wireline services." GTE agrees with the Commission's statement with two major modifications. First, if demand exists and the price and quality of the service is comparable, the probability of PCS competing with the LEC services is likely to be very high. Second, the period "over time" may be much shorter than the Commission might expect. If price and quality goals are realized, GTE proposes that within a very short time after introduction of PCS, a significant migration of subscribers will begin. Although, GTE's current PCS experiment is attempting to quantify this potential for replacement of the wire loop, even today's cellular service has prompted a number of single member households to consider relying on cellular service in place of their existing wireline service. Clearly, comparably-priced PCS must be viewed as a substitute for wireline services after it is introduced.

Given the relationship between wireline and PCS, LECs must have an equal opportunity to use new PCS spectrum to continue to provide services

to their subscribers. Barring LECs from this opportunity is tantamount to shutting them out of their existing market. The downward spiral that would result from prohibiting LECs an equal opportunity to use new PCS spectrum would put mounting pressure on the remaining LEC customers, further accelerating the migration. Damaging this sector of the telecommunications infrastructure is not in the public interest and borders on confiscation of existing LEC property.

The primary issue that might be a basis of concern regarding LEC participation, is interconnection to the Public Switched Telephone Network ("PSTN"), and the FCC has demonstrated that its non-discrimination rules are adequate to address any concerns related to interconnection.³⁸ The FCC has also expanded interconnection rights in its recent CC Docket No. 91-141 Interconnection Decision,³⁹ and is proposing additional rules.⁴⁰ The FCC has stated that it will "confirm explicitly that PCS licensees have a federally protected right to interconnection with the PSTN," NPRM, ¶99.

³⁸ NPRM, ¶102. In addition to any non-discrimination rules imposed by the Commission, the GTOCs also have a non-discrimination-in-access requirements with respect to interexchange carriers, information service providers and customer premises equipment interconnection due to the GTE Consent Decree. *U.S. v. GTE Corp.*, 603 F.Supp. 730, 738-9 (D.D.C. 1984). The other cited concern, possible cross-subsidies, is already addressed by current FCC accounting safeguards.

³⁹ Expanded Interconnection with Local Telephone Company Facilities, FCC 92-440 (Oct. 19, 1992) (Report and Order and Notice of Proposed Rule Making).

⁴⁰ Expanded Interconnection with Local Telephone Company Facilities, FCC 92-441 (Oct. 16, 1992) (Second Notice of Proposed Rule Making).

The FCC has wisely chosen not to require any particular type of interconnection. It is too early to tell what the PCS providers will need. However, as the FCC points out, LEC participation in the spectrum portion of the PCS business "may encourage them to provide their wireline architectures in a PCS-friendly way," *id.*, ¶74. The market will demand interoperability and that demand will be met.

1. **There is no basis for barring telephone companies from PCS participation inside or outside their exchange telephone service areas.**

As with cellular companies, there is no rational basis to bar LEC participation in PCS spectrum when LECs are proposing to operate outside of their service areas. Thus, GTE is gratified that the FCC has stated that LECs "would not be barred from holding 2 GHz PCS licenses outside their service areas," *id.*, ¶77, n.52. As discussed, LECs bring years of experience and a tradition of public service that will aid the Commission in achieving its stated goals for PCS.

However, what is more important to the LECs is the ability to use spectrum to compete with other PCS providers who will be competing for the same customers who populate their wireline franchise. Although GTE's PCS trials have only started, GTE notes that currently 60% of the trial participants have elected to replace their wireline telephones with PCS handsets. The more important percentage, of course, will be the number of

participants who continue to use only a PCS handset at the very end of the trial. However, even the current data are an important indication of what could happen if a LEC was prohibited from offering its customers PCS. The remaining wireline customers would be forced to absorb a larger percentage of the current non-traffic sensitive costs, and, thus, there would be pressure to raise the rates for basic service.

2. The Notice properly recognizes that a spectrum allocation should be made for telephone companies to provide access to the wireline network.

LECs need to have all technologies -- including those that use spectrum -- available to offer services desired by customers in the most cost-effective method. The public interest requires this. Just as the FCC would not restrict a LEC from using lower-cost wireline technologies to serve its customers, the FCC should not prohibit a LEC from using spectrum-based access methods that may reduce cost and/or improve service quality. Wireless access could easily become the best-suited access method for many telecommunications applications. LECs need to integrate new technology into their networks and services.

GTE, therefore, supports the FCC's tentative conclusion that: "[T]here is a strong case for allowing LECs to provide PCS within their respective service areas," id., ¶75 (emphasis added). GTE also notes that this conclusion is in accord with the NARUC Resolution urging participation

by LECs in their service areas.⁴¹ In addition to allowing LECs to compete for customers, the FCC also notes that there are economic reasons to allow LEC participation. The FCC recognizes that there will be "significant economies of scope between PCS and the LEC wireline network which would not be realized if LECs were prohibited from providing PCS within their current wireline service areas," NPRM, ¶73. LEC participation will also benefit current wireline customers since service provision using spectrum may be the more economical method to serve particular customers.

3. LECs need to be full participants in the competitive provision of PCS.

In allocating spectrum for LEC use in meeting customer needs, GTE believes that LECs should not be second-class citizens with respect to the competitive provision of PCS, and, thus, they should be eligible for the same amount of spectrum as any other PCS applicant.⁴² There should be a level playing field for all PCS applicants as far as spectrum eligibility and the amount of spectrum licensed are concerned. LECs should be allowed to compete on that playing field.

⁴¹ See NARUC No. 47-1990. ("RESOLVED, That the local wireline carrier in the market area should not be precluded by rules established in [GEN Docket no. 90-314] from being an authorized service provider").

⁴² Implicitly, therefore, GTE does not support the FCC proposal to only provide a 10 MHz slice of spectrum for LEC use -- unless this was the amount being made available for all potential PCS applicants. The LEC's PCS operations will be at a disadvantage to any other competitors unless the LEC can compete on comparable terms -- including the amount of spectrum that can be used.

If the FCC adopts GTE's proposal to have five segments of 20 MHz each available for PCS, there should be no competitive concern if a LEC obtained one of the licenses that overlapped its service territory. LECs would also like to be able to -- but not required to -- subdivide a license's geographic area to match LEC service boundaries. There are a variety of ways this could be done including a consortium approach as has been used in other countries, a partnership approach, or some method of sub-licensing small geographic areas. The FCC should allow and encourage innovative ways to subdivide licensing areas for those PCS participants who wish to do so since this will satisfy the values the Commission has established for PCS.

An additional concern for GTE is that because of the fact that GTE's cellular operations currently geographically overlap the GTOCs' service areas by only 20%, the GTOCs are at a distinct disadvantage compared to the RBOCs under any arrangement where the GTOC cannot obtain spectrum for PCS. If the FCC decides to make cellular operators or their LEC affiliates ineligible for PCS spectrum, GTE would be doubly penalized in many areas of the country. A slight overlap in one portion of a licensing area by GTE's cellular operations (beyond de minimis), could make the GTOC ineligible for PCS spectrum and this coupled with the fact that the GTOC could generally not use the GTE cellular spectrum, results in the GTOC not being able to meet its customers' needs.

In summary, the FCC should adopt its tentative conclusion and find all LECs eligible for PCS spectrum the same as other potential PCS applicants. GTE should also not be disadvantaged compared to the RBOCs. As cellular evolves its service to meet a portion of the PCS demand, the RBOCs will have PCS spectrum over their LEC franchise. At a minimum, other LECs should not be excluded from obtaining PCS spectrum over their own operating territory.

V. COMMISSION POLICIES FOR NEW AND EXISTING PERSONAL COMMUNICATIONS SERVICES MUST ENSURE THAT COMPETING SERVICES ARE SUBJECT TO COMPARABLE REGULATIONS.

The Commission's Notice appropriately devotes significant consideration to the regulatory status of PCS providers. Because there are substantial differences between the obligations of common carriers and private carriers that affect competition in mobile services, deciding how PCS providers are regulated will have ramifications beyond the market for PCS. In this regard, PCS providers will compete with other PCS providers and with existing mobile service providers, including cellular providers regulated as common carriers as well as with local exchange carriers. Accordingly, any regulatory scheme adopted for PCS providers should recognize the larger regulatory environment for all affected telecommunications services.

A. The Notice Raises Important And Thorny Regulatory Issues For Both PCS Providers And Established Service Providers.

The Commission's Notice solicits comment on "whether PCS should be classified as a common carrier or private land mobile radio service," NPRM, ¶95. As discussed below, however, simply labeling a service as private carriage or common carriage masks a host of important, significant, individual issues. Each of these issues can have enormous repercussions on the competitiveness of PCS providers and the rest of the wireless industry.

The differences between traditional common carrier regulation and private carriage are substantial and touch virtually all aspects of a carrier's business. Some of the most relevant differences are summarized below:

PRIVATE CARRIAGE	COMMON CARRIAGE
Exempt from state regulation under Section 332, unless reselling interconnected telephone service for profit.	Subject to state regulation, including economic regulation of intrastate rates, terms and conditions of service.
Are free to price services indiscriminately, unconstrained by rate regulation.	Service is subject to statutory requirements including just and reasonable rates, terms and conditions of service and prohibitions on unreasonable discrimination.
May serve or deny service to any eligible user.	Under statutory obligation to serve any user upon reasonable request.
Do not have to provide services to resellers or joint users.	Required to provide service to resellers and joint users.
Not subject to federal excise taxes.	Required to pay federal excise taxes for telecommunications services.

No alien ownership limitations.	Subject to statutory limits on alien ownership.
Single transmitter application fees of \$35.	Single transmitter application fees of \$210.

In addition, common carriers are subject to forfeiture guidelines that average ten times higher than analogous private carrier forfeiture schedules.

Common carriers have the obligation under the Americans with Disabilities Act to provide Telecommunications Relay Service ("TRS") to hearing- and speech-impaired customers, whereas, private carriers have no such obligation.⁴³

These differences impact the basics of how a carrier's service offerings are structured. And, due to differences in the need for prior regulatory approvals, the regulations also affect the speed at which a carrier is able to respond to changes in market needs. Thus, while each of these requirements has been imposed for public policy reasons, such as consumer protection or to promote communication with customers with disabilities, each represents a specific trade-off that is affected by, among other things, the level of competition in the market and the relative level of regulation on other participants. For example, resale is generally not required of a private carrier, yet is a requirement of a common carrier. If an entity cannot participate in PCS due to the unavailability of spectrum, then resale of PCS may be the only possible option left. The public interest should require that

⁴³ See also 47 C.F.R. § 64.603 (1991).

a more competitive market be enabled by requiring resale regardless of the final regulatory framework chosen -- private or common carriage.

B. In Assessing Regulatory Alternatives, An Overriding Objective Should Be To Ensure Comparable Treatment Of Existing And New Personal Communications Services.

The inquiry as to what regulatory course is ultimately adopted for PCS should be driven by the need to achieve parity in the regulatory treatment of all telecommunications service providers. As the Commission has noted, PCS providers will compete not only with other PCS entrants, but also with existing mobile carriers and LECs regulated as common carriers. If PCS were to be minimally regulated as a private land mobile service, the significant differences between private and common carriage regulations threaten to significantly distort competition. Consequently, in order to rely on market forces instead of pervasive regulation to ensure low rates and diversity of service, the Commission must ensure that regulatory parity exists among market participants.

One method for achieving regulatory parity is to regulate new Personal Communications Services as common carrier services. Alternatively, if PCS is considered private carriage, a reforming of current cellular regulation is a necessary condition precedent. Possibly anticipating this prospect, the Notice proposes revisions to the cellular rules, NPRM, ¶¶69-70. However, the Commission should recognize that the proposed revisions would not

significantly increase cellular carriers' ability to compete with private carrier

PCS systems:

- Eliminating the AMPS requirement has no effect since cellular carriers must continue to offer analog service for practical business reasons. No cellular carrier can or would abandon a base of customers painstakingly built over a multi-year period or forego the benefits of current roaming arrangements. For the foreseeable future the requirement is a practical one that cannot be abandoned.
- Telephone structural relief in the form of eliminating the separate subsidiary requirement does not provide any great benefit to the bulk of cellular carriers. The requirement does not apply to GTE or any other non-BOC cellular carrier. Most companies, like GTE, opt for the use of a separate subsidiary approach for business reasons.
- Confirming that cellular carriers may provide PCS does not recognize the core problem facing cellular carriers. Cellular carriers are already able to offer such Personal Communications Services, albeit on a common carrier basis. The difficulty is that as common carrier offerings, the full panoply of state and federal common carrier obligations would continue to apply.

Accordingly, while these efforts are admirable, they would not provide cellular carriers with the regulatory parity necessary to respond to competition by private carrier PCS providers.

For example, if PCS providers were regulated as private carriers, they would "be authorized to offer service indiscriminately to eligible users on a commercial basis," *id.*, ¶96, unconstrained by any rate regulation. A cellular carrier, in contrast, is bound by requirements to offer just and reasonable rates, terms and conditions, and is prohibited from discriminating among potential customers. Thus, a cellular carrier offering PCS may not be able to

effectively and competitively respond to a private carrier's offering of discounted rates for large users or high-volume users. A private carrier PCS provider would have significant foreign capital available to it on an equity basis. A common carrier PCS provider would have statutory limits on foreign participation. A common carrier PCS provider would be obligated to provide TRS for its hearing- and speech-impaired customers, but a private carrier would have no obligation to provide such services.

The applicability of state economic rate regulation further compounds the disadvantage of a common carrier seeking to compete with a private carrier PCS offering. Under Section 332 of the Communications Act, a private carrier PCS system, unless it is reselling interconnected telephone service for profit, would be exempted from all state regulation. Thus, if a state requires tariffed rates for common carriers, a PCS provider would have advance knowledge of a carrier's pricing policies, as well as advance notice of any attempt by the cellular provider to lower rates. Under such circumstances, effective competition would never occur.

In effect, the single most important issue for cellular carriers in attempting to compete with a private carrier version of PCS -- the ability to offer non-common carrier services -- has not been addressed at all. The Telocator Petition, which requested further cellular flexibility to offer such non-common carrier services,⁴⁴ would rectify the situation but it is not

⁴⁴ Petition for Rulemaking of Telocator at 10-11, RM-7823 (Sept. 4, 1991) ("Telocator Petition").

pursued in the Notice. Until cellular carriers are accorded the flexibility requested in the Telocator Petition, market forces will be influenced by the obligations imposed upon common carriers, and fully-effective competition will not be realized.

The Commission has stated that a primary goal in the PCS proceeding is to develop competition for PCS and to rely on market forces, rather than regulation, to lower rates and diversify services. Due to the vast differences between common and private carrier regulations and obligations, however, effective competition will not develop if some participants are regulated as common carriers and some as private carriers. To achieve the Commission's competitive ideal, regulatory parity must be established for all participants.

**VI. PCS LICENSING POLICIES SHOULD ENSURE THAT
TECHNICALLY AND FINANCIALLY QUALIFIED APPLICANTS
RECEIVE LICENSES, AND A COMPARATIVE PREFERENCE
SHOULD BE GIVEN TO EXPERIENCED SERVICE PROVIDERS.**

**A. Stringent Requirements Are Essential To Prevent
Speculative Abuses Of The Licensing Process.**

The FCC correctly notes that it currently only has two options for selecting among mutually exclusive PCS applications: comparative hearings and lotteries. While the FCC adds competitive bidding as a possible third option, most parties acknowledge that many in Congress have opposed such a licensing method and that it is highly unlikely that the FCC will receive such statutory authority to use competitive bidding for PCS licenses in the

FCC's stated time frame for licensing. This Session of Congress is over. After the first of the year, there will be many new issues facing a new Congress. Legislative re-scheduling may delay this issue beyond the time when license assignments will need to be made.

Since the FCC has stated that it is committed to allocating spectrum for PCS early next year, as a practical matter, competitive bidding will be unavailable as an option. This leaves, therefore, comparative hearings and lotteries. Of the two, GTE believes comparative hearings, if properly administered, still yield the most-qualified applicants. If the FCC establishes its technical and financial requirements in such a way that only serious parties apply, and if the FCC makes the maximum number of licenses available and utilizes the smallest geographic licensing areas -- while also encouraging consortia and other arrangements to subdivide license areas -- then the FCC may not have that many mutually exclusive applications.⁴⁵

In any licensing method the FCC ultimately adopts to assign PCS licenses, whether in the 2 GHz or 900 MHz bands, the FCC needs to minimize the abusive speculation that has occurred in the past. There are

⁴⁵ The FCC has tentatively decided to award three 2 GHz PCS licenses via the Pioneer's Preference mechanism. The tentative awardees are American Personal Communications, Omnipoint Communications, and Cox Enterprises. See Amendment of the Comm'n's Rules to Establish New Personal Communications Services, FCC 92-467 (Nov. 6, 1992). In the Notice, the Commission has also tentatively awarded a 900 MHz PCS Pioneer's Preference to Mobile Telecommunications Technologies Corporation ("Mtel"). See NPRM, ¶¶149-151.

methods that work in minimizing unqualified applicants from filing, whether these methods are used in a comparative hearing process or with a lottery:

- Strict financial and technical qualifications showings are necessary;
- Minimum construction commitments and deadlines should be established;
- Short filing windows help to weed out the application mills;
- Strict anti-trafficking rules are necessary; and
- Significant filing fees will discourage mere speculators.

Each of these provisions will help ensure that only parties who have a serious interest in delivering PCS systems will apply for spectrum. This will also reduce the administrative burden on Commission resources. However, as true in any competitive market, some initially-serious applicants may not survive the rigors of the marketplace. After initially qualifying to hold a license, if a grantee finds it must exit the market, the Commission should allow any otherwise eligible party to acquire that license. However, the FCC should not condone trafficking in bare licenses; some minimum buildout of the proposed system should be required. After gaining some experience with the market, the FCC should consider allowing an entity to hold up to two licenses in the same market.⁴⁶ The most efficient operators will gain the largest market share. If this efficiency causes others to exit the market,

⁴⁶ These could be either two 2 GHz PCS licenses or a 2 GHz PCS license and a cellular license.

then allowing the shift of what was inefficiently-used spectrum to an efficient operator would serve the public interest.

If the FCC decides to use lotteries, then GTE recommends not using a "contingent winner's" approach. By initially ranking all applicants, the FCC converts the lottery into the worst parts of the comparative hearing process. Just as in comparative hearings where significant resources are spent trying to find minor items that will cause one applicant to appear more qualified than another; this contingent winner's approach provides strong incentives for the next applicant on the list to commit significant resources to find minor items that will knock the winner out of the winner's circle. If the FCC does not determine the next potential winner until after the first selectee's application is ruled defective, there is less of an incentive for any party to commit significant resources challenging the initial winner, since there is no guarantee that such a challenge will result in a license award to the challenger.

As previously mentioned, if the FCC determines to make some class of applicants ineligible to hold a PCS license, this requirement should not apply at the time of application filing, but, instead, the FCC should accord a reasonable time for divestiture of any facilities or holdings that trigger the ineligibility threshold. In this way, all qualified parties are allowed to compete for spectrum even if there has to be some divestiture of current control over spectrum due to competitive considerations.

B. The Licensing Process Should Recognize And Prefer Experienced Providers Of Wireless Services And Others Who Will Deploy PCS Rapidly.

Since the FCC lists "speed of deployment" as one of its values in the regulatory structure for PCS, the Commission should give consideration to offering a preference to those parties who can demonstrate the ability to deploy PCS rapidly. This would include experienced providers of wireless services. The FCC already has knowledge of these providers and their ability to construct systems, to comply with the FCC's rules, and to quickly bring new services to the public. They should be given a comparative -- but not dispositive -- preference in any comparative hearing process. If lotteries are used, the preference could be by a weighting factor, again providing a comparative preference, not a dispositive preference.

Another area where the Commission may wish to consider granting a preference, is for those parties who propose systems for the rural areas of the United States. In the case of cellular, the RSAs were the last to be licensed and, thus, the last to be built. For PCS, the FCC could turn this around. Since rural areas are likely to have less demand for PCS and, therefore, on an economic basis alone, rank lower as likely PCS infrastructure locations, a preference for rapid deployment in rural areas could provide the incentive to have parties serve these areas more quickly and possibly at the same time that urban areas are being constructed.

As many parties noted in their Comments in the Notice of Inquiry phase of this proceeding, there are sound policy reasons to treat rural areas differently than large urban areas.⁴⁷ It has been federal policy to support infrastructure development in rural areas.⁴⁸ The same should be true for PCS.

IX. THE COMMISSION SHOULD RELY ON INDUSTRY STANDARDS BODIES TO ANSWER PCS TECHNICAL ISSUES.

A. The Notice Correctly Concludes that PCS Providers Should Only Be Subject to Minimal Technical Regulations.

Flexible service rules and minimal technical rules serve the public interest. Personal Communications Services are an extremely broad and still-evolving group of services. Mandating detailed technical standards could dampen the considerable innovation and progress that has characterized the industry to date. Furthermore, to the extent that standards beyond minimal interference criteria are necessary, adequate industry fora exist to develop

⁴⁷ See, e.g., Comments of GTE Service Corp. at 23, GEN Docket No. 90-314 (Oct. 1, 1990); Comments of Telephone and Data Systems, Inc. at 15, GEN Docket No. 90-314 (Oct. 1, 1990); Comments of the Organization for the Protection and Advancement of Small Telephone Companies, GEN Docket No. 90-314 (Oct. 1, 1990); Comments of the United States Telephone Association at 11 & n.1 (Oct. 1, 1990).

⁴⁸ See, e.g., 7 U.S.C. § 901 et seq. (1992) (establishing Rural Electrification Administration); 47 U.S.C. § 613(c) (1992) (establishing rural exemption to Cable/Telco cross-ownership restriction); Telephone Company Cable Television Cross Ownership Rules, FCC 92-327 (Aug. 14, 1992) (recommending further relaxation of the rural exemption to Cable/Telco cross ownership rules); Telecommunications Authorization Act of 1992 § 134, Pub. Law No. ___ (improving the ability of rural health providers to use communications to obtain health information and to consult with others concerning the delivery of patient care).

consensus positions at appropriate times. As discussed below, the wisdom of this flexible approach is readily apparent from the cellular industry experience.

The Commission has defined PCS as "a family of mobile or portable radio communications services which could provide services to individuals and business, and be integrated with a variety of competing networks," NPRM, ¶29. This definition subsumes a vast range of service concepts, infrastructure designs, and implementing technologies. As shown by the wealth of experimental proposals to date, the public's requirements for advanced communications can be satisfied in diverse ways. As the Commission has observed, "many PCS concepts are still being developed" and "many PCS technologies are at their inception," *id.*, ¶105. To mandate detailed technical standards at this stage would be premature and could potentially impair the diversity the Commission is seeking to promote.

To the extent that technical standards are eventually needed and can be reliably determined, the least-constraining means of developing such standards are industry bodies. As the Commission noted, "industry standards bodies seem to serve the functions that the Commission might logically assign an advisory committee, such as development of, and making recommendations for, interoperability and interconnectivity standards," *id.*, ¶106. By allowing those most affected by technical standards to develop standards through an evolutionary consensus process, the Commission

would permit the industry to be more responsive by avoiding a "regulatory morass" every time consumers' needs change.

Experience has shown that artificial regulatory constraints on the flexibility to respond to changing or new consumer needs disserves the public interest. The Commission has already found in the Notice that:

[T]he initial detailed technical and compatibility standards governing the cellular service provided for a rapid and highly successful development of the service but subsequently impeded both development of new services and accommodation of the large number of additional subscribers anticipated in the future.⁴⁹

The Commission has noted that the birth of cellular was a "years-long" process, partly due to the micromanagement necessary to develop workable regulations and because such regulatory processes "can be manipulated to delay the initiation of a new service," NPRM, ¶7. And, as the Commission has noted, the cellular rules also have required numerous changes to provide carriers with additional needed flexibility to implement new services, a process that has delayed the introduction of services necessitated by market changes.⁵⁰ Recreating a similar process for PCS would delay not only the ultimate introduction of service, but also the refinement of services, and

⁴⁹ NPRM, ¶24. See also Reconsideration of Rules Concerning Subsidiary Communications Authorization, 55 Rad. Reg. 2d (P & F) at 1615 (stating "[t]he regulatory process . . . should not act as a barrier to those who wish to provide new and additional services").

⁵⁰ Liberalization of Technology and Auxiliary Service Offerings in the Domestic Public Cellular Radio Telecommunications Service, 3 FCC Rcd 7033 (1988); Telocator Petition at 3-5; Applications for Unserved Areas in the Cellular Service, 7 FCC Rcd 2449 (1992); Revision of Part 22 of the Commission's Rules, 7 FCC Rcd 3658 (1992) (Notice of Proposed Rule Making); NPRM, ¶69 n.48.

adversely affect one of the Commission's four PCS values -- speed of deployment, NPRM, ¶6.

When technology is in a rapid state of flux, regulators should not try to determine the appropriate implementation of that technology. PCS is today undergoing rapid changes and development of possible technical alternatives. It is premature to tell what technologies will ultimately be chosen. This is evident even in the cellular market, where multiple standards are in work due to the rapid advances in technology. At best, regulators should offer encouragement to the standards process, but stop short of mandating any particular technical implementation unless there is a determination that a marketplace failure has occurred.

B. International Interoperability Is More Important For Compatibility With Our North American Neighbors.

As GTE noted in its earlier Comments in this proceeding, compatibility of the radio frequency ("RF") portion of PCS or the Common Air Interface ("CAI") is of prime importance with respect to our neighbors on this continent.⁵¹ PCS is primarily a local or regional service. This would encompass a large volume of traffic that would be generated near our Northern and Southern borders. GTE can see less need for compatibility with other countries' systems.

⁵¹ Comments of GTE Service Corp. at 16-17, GEN Docket No. 90-314 (Oct. 1, 1990).

**C. Radio Frequency Effects Questions Should Be Resolved
By Reference To The 1991 IEEE Standard.**

In the Notice, the FCC questions whether PCN/PCS devices will be able to comply with RF "exposure guidelines that may be applicable to them," NPRM, ¶132. At the present time the FCC is still using the 1982 version of the American National Standards Institute ("ANSI") Standard as its guideline for human exposure to electromagnetic fields.⁵² Absent any other federal direction, GTE recommends that the FCC use the more current IEEE C95.1-1991 Revision of ANSI C95.1-1982 for PCS.⁵³ This later Standard reflects the latest knowledge of the leading experts on bioeffects of RF energy.

The 1991 IEEE Standard eliminates the blanket 7 Watt exclusion for handheld devices and substitutes a frequency dependent exclusion limit which when extrapolated to 1900 MHz would equal to 330 mW. Should

⁵² 47 C.F.R. § 1.1307(b) (1991).

⁵³ IEEE C95.1-1991 (Revision of ANSI C95.1-1982), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz, (approved Sept. 26, 1991). As the Commission has long noted, other federal agencies may have a direct responsibility to determine safe levels of electromagnetic energy exposure for humans. Pending direction from other agencies, the FCC has used credible, scientifically-based, voluntary standards as its interim guidance under the National Environmental Policy Act. If the Occupational Safety and Health Administration sets employee safety criteria, or if the Environmental Protection Agency sets general population exposure rules, then the FCC's Rules may no longer be needed. If PCS devices become as pervasive as they are predicted to become, then the Consumer Product Safety Commission may choose to regulate safety issues of this consumer product, including its RF emissions, or the Food and Drug Administration could choose to regulate electromagnetic emissions from such devices under the Radiation Control for Public Health and Safety Act of 1968, Pub. Law No. 90-602, 42 U.S.C. § 2636 et seq. (1992). Thus, it is not clear what standards such PCS devices may be required to meet.

the FCC decide to base its ruling on the 1991 Standard, the PCS handheld units will have to be evaluated under these more restrictive provisions. GTE believes that the proposed, NPRM, ¶116, power level of 200 Watts (EIRP) for handheld mobile units is not realistic either from the technical or from the human exposure point of view. Consider, for instance, the large size and anticipated very short life time of a battery pack needed to power such a device. Human exposure would be excessive at 200 Watts. A more realistic average power level for handheld mobile units would be the above-stated 330 mW.

VIII. CONCLUSION

GTE believes that the rapid and successful introduction of PCS will require sound regulatory decisions reflecting great foresight on how best to deploy and integrate PCS with established services. In such respects, GTE believes that there are a number of important public policy issues that remain unresolved and unaddressed in the Notice. For all of the above-stated concerns, the Commission should first establish an adequate record to demonstrate that it has evaluated the demand for PCS and the impact of

PCS on all facets of the telecommunications industry prior to allocating any spectrum for this service.

Respectfully submitted,

GTE CORPORATION

By: 

Edward C. Schmults
Senior Vice-President
External Affairs &
General Counsel
One Stamford Forum
Stamford, CT 06904

Daniel L. Bart
1850 M Street, N.W.
Suite 1200
Washington, DC 20036
202-463-5212

November 9, 1992

Its Attorneys